KSN 2016 Abstract Submission

CKD & associated complications

KSN2016ABS-1094

The Patterns of Ambulatory Blood Pressure is Quite Different in Patients with End-Stage Renal Disease According to Dialysis Modality

Youn Kyung Kee*[1], Hyoungnae Kim[1], Seohyun Park[1], Hae-Ryong Yun[1], Su-Young Jung[1], Jong Hyun Jhee[1], Chang-Yun Yoon[1], Young Eun Kwon[1], Jung Tak Park[1], Seung Hyeok Han[1], Hyeon Chang Kim[2], Sungha Park[1], Shin-Wook Kang[1], Tae-Hyun Yoo[1]

[1]Department of Internal Medicine, [2]Department of Preventive Medicine, Yonsei University College of Medicine, Seoul, Korea, Republic Of

Background: Since accurate assessment of blood pressure (BP) is essential to control BP adequately, ambulatory blood pressure monitoring (ABPM) is widely used for estimation of BP status and has prognostic significance in patients with hypertension (HTN) including end-stage renal disease (ESRD). Although the ABPM patterns might be distinguished due to the inherent characteristics of dialysis modality, there has been lacking evidences until now. Therefore, the aim of this study was to elucidate difference of ABPM parameters and pattern according to the dialysis modality.

Methods: Patients were prospectively enrolled by Cardiovascular and Metabolic Disease Etiology Research Center of Yonsei University College of Medicine between November 2013 and August 2015. We analyzed the differences of baseline characteristics, office BPs, ABPM parameters and ABPM patterns (dipper, non-dipper and reverse dipper) in ESRD patients according to the dialysis modality.

Results: Among a total of 174 patients, 109 (62.6%) were hemodialysis (HD) patients and 65 (37.4%) were peritoneal dialysis (PD) patients. The number of patients with HTN was 155 (89.1%), 96 (88.1%) in HD patients and 59 (90.8%) in PD patients. All measured diastolic BP (DBP) and 24 hours mean arterial pressure (MAP) were significantly higher in PD patients (office DBP, 78.1±11.9 and 83.5±13.9 mmHg, p=0.011; 24 hours mean DBP, 81.8±10.7 and 86.7±11.2 mmHg, p=0.006; daytime DBP, 83.42±10.9 and 88.0±11.3 mmHg, p=0.010 and night time DBP, 78.8±12.2 and 83.1±12.9 mmHg, p=0.032; 24 hours MAP, 102.1±13.2 and 106.3 ±13.6 mmHg, p=0.047) compared to those in HD patients. The prevalence of non-dipper at ABPM was higher in PD patients than HD patients (dipper vs non-dipper; 33.0% vs 39.4% in HD and 26.2% vs 47.7% in PD). Total number of patients with two or more antihypertensive medications was higher in PD patients than HD patients (HD vs PD; 18.3% vs 46.2%, p<0.001).

Conclusion: ABPM patterns, 24 hours mean DBP and MAP in dialysis patients were significantly different according to dialysis modality. Further prospective observation is needed to elucidate the prognostic significance of ABPM parameters and patterns in dialysis population.

Keywords: Ambulatory blood pressure monitoring, Continuous ambulatory peritoneal dialysis, Hemodialysis